

# C.1 Containers

MICHIGAN DISPOSAL WASTE TREATMENT PLANT (MDWTP)  
MID 000 724 831  
2016 PERMIT APPLICATION

**FORM EQP 5111 ATTACHMENT TEMPLATE C1**  
**USE AND MANAGEMENT OF CONTAINERS**

This document is an attachment to the Michigan Department of Environmental Quality's *Instructions for Completing Form EQP 5111, Operating License Application Form for Hazardous Waste Treatment, Storage, and Disposal Facilities*. See Form EQP 5111 for details on how to use this attachment.

R 299.9614 of the administrative rules promulgated pursuant to Part 111, Hazardous Waste Management, of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); R 29.4101 to R 29.4505 promulgated pursuant to the provisions of the Michigan Fire Protection Act, PA 207, as amended (Act 207); and Title 40 of the Code of Federal Regulations (CFR) §§270.14(d), 270.15, and Part 264, Subpart I, establish requirements for the use and management of containers. All references to 40 CFR citations specified herein are adopted by reference in R 299.11003.

This license application template addresses requirements for the use and management of containers at the Michigan Disposal Waste Treatment Plant facility in *Belleville*, Michigan. This template addresses the condition of containers, compatibility of waste with containers, management of containers, inspections, containment, special requirements for ignitable or reactive waste, special requirements for incompatible wastes, and closure.

(Check as appropriate)

Applicant for Operating License for Existing Facility:

☒ R 299.9614 use and management of containers

Applicant for Operating License for New, Altered, Enlarged, or Expanded Facility:

☐ R 299.9614 use and management of containers

## Table of Contents

INTRODUCTION.....	3
C1.A DESCRIPTION OF CONTAINERS.....	3
C1.B CONDITION OF CONTAINERS.....	3
C1.C COMPATIBILITY OF WASTE WITH CONTAINERS .....	3
C1.D MANAGEMENT OF CONTAINERS.....	4
C1.E INSPECTIONS .....	4
C1.F CONTAINMENT.....	4
C1.F.1 Secondary Containment System Design and Operation for Containers with Free Liquids .....	4
C1.F.1(a) Requirement for Base or Liner.....	4
C1.F.1(b) Containment System Drainage.....	4
C1.F.1(c) Containment System Capacity .....	5
C1.F.1(e) Removal of Liquids from Containment System .....	5
C1.F.2 Secondary Containment System Design and Operation for Containers with No Free Liquids .	5
C1.F.2(a) Containment System Drainage.....	6
C1.F.2(b) Container Management.....	6
C1.G SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTE .....	6
C1.H SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES.....	6
C1.I CLOSURE .....	6

## **INTRODUCTION**

MDWTP has three container storage locations identified as the North Container Storage Area (NCSA), East Container Storage Area (ECSA) and Southeast Container Storage Area (SECSA). The NCSA is enclosed by roof and walls whereas the ECSA and SECSA are not. The container storage areas are shown on the attached MDWTP site plan. MDWTP can also temporarily store containers in the East and West Treatment Bays while operating.

The East and West Treatment Bays are located inside the waste treatment buildings south of the treatment tanks.

The following table provides a summary of waste that may be stored in the container storage areas in closed bulk or non-bulk containers.

### **C1.A DESCRIPTION OF CONTAINERS**

[R 299.9614 and 40 CFR §264.171]

#### ***NCSA and ECSA***

The NCSA and ECSA may not exceed a combined total of 124,000 gallons or 2,255 55 gallon container equivalents of hazardous waste.

#### ***SECSA***

181,800 gallons of hazardous liquid waste or 946 cubic yards of solid hazardous waste.

#### ***East and West Treatment Bays***

Each bay may store 5,500 gallons or 100, 55-gallon container equivalents of untreated waste in containers, outside the waste treatment tanks. Each bay may also store 250 cubic yards of treated waste outside of the waste treatment tanks.

All container storage areas may store the following waste:

- Untreated waste
- Consolidated/bulked waste
- Treated waste awaiting analytical results
- Treated waste meeting LDRs

### **C1.B CONDITION OF CONTAINERS**

[R 299.9614 and 40 CFR §264.171]

Containers will be visually inspected to ensure that they are in good condition and not leaking. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the hazardous waste will be transferred from the damaged container to a container that is in good condition or the waste will be processed.

### **C1.C COMPATIBILITY OF WASTE WITH CONTAINERS**

[R 299.9614 and 40 CFR §264.172]

Container compatibility, bulking/consolidation and segregation is completed as outlined in Attachment A2

#### Chemical and Physical Properties.

A fork truck may be used to transport non-bulk containers to a treatment or storage tank. Containers destined for the treatment tank are opened by facility personnel and a drum grapppler is used to invert the container and decant the contents. Containerized liquid waste may be pumped directly into a permitted tank or into suitable bulk container that can unload directly into the waste treatment tank or pump into vertical liquid storage tank.

Containers that are difficult to empty are picked up with a container-sizing implement attached to a backhoe. The container is then placed over the appropriate treatment tank and sized into the tank. The contents of the container are emptied and the destroyed container is also deposited into the tank for appropriate treatment with the batch.

Large containers such as roll-off boxes, vacuum boxes or dump trailers are emptied while still attached to a transport vehicle. To empty, the containers are opened on one end, the other end is raised and the waste slides out into a treatment tank.

Facility personnel confirm the contents of the containers emptied meet RCRA empty container requirements. Non-bulk containers may be processed as waste through the treatment tanks or recycled.

### **C1.D MANAGEMENT OF CONTAINERS**

[R 299.9614 and 40 CFR §264.173]

In accordance with 40 CFR 264.173 containers holding hazardous waste will be closed during storage, except when it is necessary to add or remove waste, and they will not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

### **C1.E INSPECTIONS**

[R 299.9614 and 40 CFR §264.174]

Inspection procedures are outlined in Attachment A5 Inspection Schedules and comply with the requirements set forth by 40 CFR 264.174.

### **C1.F CONTAINMENT**

[R 299.9614 and 40 CFR §§264.175 and 270.15]

#### **C1.F.1 SECONDARY CONTAINMENT SYSTEM DESIGN AND OPERATION FOR CONTAINERS WITH FREE LIQUIDS**

[R 299.9614 and 40 CFR §§264.175(a) and 270.15(a)]

##### **C1.F.1(a) Requirement for Base or Liner**

[R 299.9614 and 40 CFR §§264.175(b)(1) and 270.15(a)(1)]

Containers are stored in a manner that will contain potential leaks/spills within the containment area. Containment systems are comprised of concrete that is made impervious to water by the addition of suitable products into or onto the concrete (e.g., Xypex) and the use of water stop in joints.

##### **C1.F.1(b) Containment System Drainage**

[R 299.9614 and 40 CFR §§264.175(b)(2) and 270.15(a)(2)]

Concrete containment areas are free of cracks and gaps and are sufficiently impervious to contain leaks, spills, and accumulated liquid until the collected material may be removed. Concrete is sloped to allow liquids to flow into the containment trenches. Containment trenches are located in the container storage area drawings of Attachment B6 Engineering Plans.

**C1.F.1(c) Containment System Capacity**

[R 299.9614 and 40 CFR §§264.175(b)(3) and 270.15(a)(3)]

Container storage areas are designed to contain a 24 hour, 25-year storm and 10 percent of the maximum quantity of containerized liquid waste. The NCSA and ECSA have a combined capacity because of the NCSA extension that provides overflow containment for the ECSA. Provided below are the required capacities to meet this requirement and the actual capacities of the containment systems.

Storage Area	Maximum Container Storage Capacity	Required Capacity (10% of Storage Capacity)	Required Capacity for 25 year, 24 hour storm	Total Required Liquid Capacity	Actual Containment Capacity
ECSA	124,000	12,400	35,547	47,947	110,674
NCSA			Covered		
SECSA (Liquids)	181,500	18,150	15,620	33,770	38,879

**C1.F.1(d) Control of Run-on**

[R 299.9614 and 40 CFR §§264.175(b)(4) and 270.15(a)(4)]

Run-on is prevented from entering the NCSA and ECSA by retaining walls and elevated surfaces relative to surroundings. NCSA is enclosed which reduces precipitation and run-on from entering. Run-on is prevented from entering the liquids storage area within the SECSA by a retaining wall and the elevation of this area relative to the surrounding area. Run-on to the solids-only portion of the SECSA is minimized by directing runoff from adjacent areas away from the SECSA. Any run-on that does reach the solids-only portion of the SECSA is directed to two catch basins that flow to an onsite storm water collection pond (aka the lined pond).

**C1.F.1(e) Removal of Liquids from Containment System**

[R 299.9614 and 40 CFR §§264.175(b)(5) and 270.15(a)(5)]

Accumulated liquids collected in the containment structure or trench are removed within 24 hours of detection when weather permits. Solids are removed within 60 days. Removed liquids are managed either through the waste treatment plant, through the on-site wastewater pre-treatment plant or off-site.

**C1.F.2 SECONDARY CONTAINMENT SYSTEM DESIGN AND OPERATION FOR CONTAINERS WITH NO FREE LIQUIDS**

[R 299.9614 and 40 CFR §§264.175(c) and 270.15(b)(1)]

Containers holding waste without free liquids are exempt from secondary containment requirements if the

storage area is sloped or otherwise designed and operated to drain and remove liquids resulting from run on and off precipitation. As described above all of the container storage areas have run on and run off controls in place.

**C1.F.2(a) Containment System Drainage**

[R 299.9614 and 40 CFR §§264.175(c)(1) and 270.15(b)(2)]

As stated in C1.F.1(d) the container storage areas are sloped in a manner that allows run on and off to flow to a collection point.

**C1.F.2(b) Container Management**

[R 299.9614 and 40 CFR §§264.175(c)(2) and 270.15(b)(2)]

All container storage areas are designed and operated to drain and remove liquids as described above.

**C1.G SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTE**

[R 299.9614 and 40 CFR §§264.176 and 270.15(b)(2)]

Ignitable and reactive waste may be stored in the NCSA and ECSA and are segregated by the DOT segregation requirements.

**C1.H SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES**

[R 299.9614 and 40 CFR §§264.177(c) and 270.15(b)(2)]

Prior to consolidating or bulking waste, containers will be evaluated to ensure waste meet compatibility requirements outlined in A2 Chemical and Physical Analyses. Empty containers that previously held an incompatible waste or material will be washed before the container is used.

**C1.I CLOSURE**

[R 299.9614 and 40 CFR §264.178]

Closure information is provided in A11 Closure Care Plan.